Conference on IEEE 1588

Green Auditorium, Building 101
National Institute of Standards and Technology
Gaithersburg, Maryland, USA

AGENDA

Monday, October 2, 2006

- 8:30 – 8:50 AM: Plug-fest participants pick up visitor badges at NIST Visitor Center*
- 8:30 – 9:00 AM: Plug-fest participants register at desk outside the Green Auditorium*
- 9:00 – 5:00 PM: **Plug-fest,** Moderator: Andrew Fernandez, Martin Curran-Gray – Agilent Technologies: The Plug-fest will be held in the Red Auditorium. (Plug-fest activities open only to those directly involved in plug-fest testing.)

Tutorial (Open to all registered conference attendees)

- 1:00 – 1:50 PM: Tutorial attendees pick up visitor badges at NIST Visitor Center*
- 1:30 – 2:00 PM: Tutorial attendees register at desk outside the Green Auditorium*
- 2:00 – 5:20 PM: **IEEE 1588 Tutorial.**
    - 2:00 – 3:00 PM: **IEEE 1588 Basics**: Hans Weibel – Zurich University of Applied Sciences
    - 3:00 – 3:30 PM: **IEEE 1588 Version 2**: John C. Eidson – Agilent Technologies
    - 3:30 – 3:50 PM: Break
    - 3:50 – 4:20 PM: **Telecommunications Applications**: Silvana Rodrigues – Zarlink Semiconductor.
    - 4:20 – 4:50 PM: **Industrial and Motion Control Applications**: Anatoly Moldovansky – Rockwell Automation; Ludwig Winkel – Siemens.
    - 4:50 – 5:20 PM: **Test and Measurement Applications**: John C. Eidson – Agilent Technologies

Tuesday, October 3, 2006

- 7:30 AM: NIST bus leaves conference hotel for NIST
- 7:40 – 8:15 AM: Conference attendees pick up visitor badges at NIST Visitor Center*
- 7:45 – 8:20AM: Coffee & Bagel, Conference attendees register at desk outside the Green Auditorium*

Opening Session:

- 8:20 – 8:40 AM:
    - **Opening comments and welcome**: Kang Lee - NIST
    - **Welcome from the Office of NIST Director:** Dr. Jim Hill, NIST Acting Deputy Director

Session 1:

Application Topics–1, Moderator: Hans Weibel – Zurich University of Applied Sciences

- 8:40 – 9:10 AM: **Clock synchronization over 802.11 for home A/V applications:** *Kevin Stanton – Intel*
- 9:10 – 9:40 AM: **1588 Un-Plugged:** *Martin Curran-Gray – Agilent Technologies UK Ltd*
- 9:40 – 10:10 AM: **Stimulus/Response Measurement System Utilizing IEEE 1588 Synchronization**: *Ed Barich – System Products Operation, Agilent Technologies*
- 10:10 – 10:30 AM: Break

Session 2:

General Session: Moderator: John C. Eidson – Agilent Technologies

- 10:30 – 10:45 AM: **Report on IEEE 1588 Standards Activity:** John C. Eidson –Agilent Technologies
- 10:45 – 11:00 AM: **Plug-fest Introduction:** Andrew Fernandez, Martin Curran-Gray – Agilent Technologies
- 11:00 AM–Noon: Plug-fest demonstration (Red Auditorium)

Lunch: Noon – 1:00 PM

Session 3:

System and Design Issues, Moderator: Kang Lee – NIST

- 1:00 – 1:30 PM: **Specifying the Timing Performance of IEEE 1588 Devices:** *Samuel Stein – Timing Solutions.*
- 1:30 – 2:00 PM: **A Programming Environment for Distributed Real-time Systems:** *Yang Zhao, Edward A. Lee – EECS Department, University of California at Berkeley*
- 2:00 – 2:30 PM: **Lessons learned from a large-scale IEEE 1588 Simulation Environment:** *Georg Gaderer, Gerhard Siber, Patrick Loschmidt – Research Unit for Integrated Sensor Systems, Austrian Academy of Sciences*
- 2:30 – 3:00 PM: **Issues and Observations Discovered Porting Open-Source PTPD to IPv6**: *Mark Elliot – Symmetricom*
- 3:00 – 3:30 PM: Break

Session 4:

Application Topics–2, Moderator: Georg Gaderer – Austrian Academy of Sciences

- 3:30 – 4:00 PM: **Design and Performance of Transparent Clock over Existing Network Elements using Modified Pluggable GigaBit Interface Converters**: *Ski Ilnicki, Takashi Hidai, Jeff Burch– Agilent Technologies, Inc.*
- 4:00 – 4:30 PM: **Deriving Consistent Time Base Using Local Clock Information:** *Ashok Agrawala, Moustafa Youssef – Computer Science Dept. University of Maryland*
- 4:30 – 5:00 PM: **Clock Synchronization in Audio/Video Bridging Networks Using IEEE 1588 Version 2**: *Geoffrey M. Garner, Kees den Hollander – Samsung Electronics*
- 5:15 PM Bus leaves NIST for hotel
- 6:00 PM Bus leaves hotel for conference dinner

Conference Dinner: 6:30 PM: (NIST bus returns to hotel after dinner – approximately 9:00 PM)

Wednesday, October 4, 2006

- 7:45 AM: NIST bus leaves conference hotel for NIST
- 7:45 – 8:30 AM: Conference attendees pick up visitor badges at NIST Visitor Center*
- 7:45 – 8:30 AM: Coffee & Bagel, Conference attendees register at desk outside the Green Auditorium*

Session 5:

Application Topics–3, Moderator: Ken Harris – Rockwell Automation

- 8:30 – 9:00 AM: **IEEE 1588 in Navy Next Generation Time Sensitive Applications**: *Karen O'Donoghue, et. al. – US Navy*

- 9:00 – 9:30 AM: **Practical Aspects Impacting Time Synchronization Data Quality in Semiconductor Manufacturing:** *James Moyne[1], Jonathan Parrott[1], Naveen Kalappa[1], Ya-Shian Li[2]– [1]University of Michigan., [2]National Institute of Standards and Technology*
- 9:30 – 10:00 AM: **IEEE 1588 in telecoms application**: *Dave Tonks – Semtech*
- 10:00–10:30 AM: Break

Session 6:

Application Topics–4, Moderator: Dirk Mohl – Hirschmann Automation and Control

- 10:30 – 11:00 AM: **Combining Synchronous Ethernet and IEEE1588 for use in Telecom**: *Silvana Rodrigues – Zarlink*
- 11:00 – 11:30 AM: **Using IEEE 1588 as a tool for Analysis of Network Packet Delay Variation:** *Lee Cosart, Tom Farley – Symmetricom*
- 11:30 AM – Noon: **Asymmetry in Telecom Networks– Solutions for IEEE 1588**: *Dave Tonks – Semtech*

Lunch: Noon – 1:00 PM:

Session 8:

Implementation Topics, Moderator: Galina Antonova – General Electric

- 1:00 – 1:30 PM: **IEEE 1588 Hardware for Fault Tolerance and High Precision:** *Patrick Loschmidt, Georg Gaderer – Research Unit for Integrated Sensor Systems Austrian Academy of Sciences, and Nikolaus Kerö – Oregano Systems GesmbH*
- 1:30 – 2:00 PM: **Design of an IEEE-1588 Interface for Sub-nanosecond Performance**: *Marek Christer, Steve Passe, Samuel Stein– Timing Solutions.*
- 2:00 – 2:30 PM: **Improvements to Boundary Clock Based Time Synchronization through Cascaded Switches**: *Sihai Wang, Jaehun Cho, Geoffrey M. Garner –Samsung Electronics*
- 2:30 – 3:00 PM: Break
- 3:00 – 3:30 PM: **PPS over Ethernet (PPSoE): Generating high quality synchronization signals by disciplining a high quality oscillator with IEEE 1588**: *Heiko Gerstung – Meinberg Radio Clocks*
- 3:30 – 4:00 PM: **Pre-Standard Prototype Implementation of an End-to-End Transparent Clock:** *Dirk Mohl – Hirschmann Automation and Control GmbH, Hans Weibel – Zurich University of Applied Sciences*

Closing Session: Moderator: Kang Lee – NIST

- 4:00 – 4:15 PM: **Invitation to the "2007 International IEEE Symposium on Precision Clock Synchronization for Measurement, Control, and Communication".** *Georg Gaderer – Research Unit for Integrated Sensor Systems Austrian Academy of Sciences*
- 4:15 – 4:30 PM: **Closing remarks.** Kang Lee – NIST
- 4:45 PM: NIST bus returns to hotel

*NIST visitor badges are good for the entire conference. After the first day attended, attendees need only show the badge and photo ID at the entrance gate. Registration outside the Green Auditorium is only required the first day of attendance. Passwords for wireless access will be distributed at the registration desk.